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EC-NOAA Memorandum of Understanding (MOU)

Review of past achievements and Focus for next four years

**Virtual US-Canada Border
Conference**

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Brief overview of EC-NOAA MOU

- 2008 agreement replaced prior agreements between NWS and MSC (from 2002) and NOAA/NESDIS – MSC (2003), elevating joint collaboration at a broader level between the 2 agencies (i.e. NOAA/EC)
- Purpose:
 - Formalize and foster our long-standing cooperation
 - Facilitate exchange of info, technology and management practices
- Oversight provided by Cooperation Steering Committee (CSC)
 - Co-Chairs on NOAA rotate between business line AA's; ADM of MSC is the Canadian Co-Chair



Brief Overview of EC-NOAA MOU (cont.)

- 2008 – 2010: review of cooperative activities, explored new joint activities, defined and refined areas of cooperation, identifying leads, etc.
- By 2010, agreement on four areas of focus:
 - Marine Forecast Systems
 - Climate
 - Hydrology
 - Arctic



CSC Standing Project Guidance

- New projects should be:
 - Something we can cooperate on together
 - Do-able in 24 months
 - Demonstrable benefits to priorities of both organizations
 - Demonstrate efficiency benefits to both countries (i.e. can achieve things faster, better, cheaper, through collaboration)
- After two years, the CSC will assign a status as:
 - Completed – project can be closed out
 - Graduated – project complete and now ongoing effort that does not require regular CSC reporting but occasional “check-in”
 - Continue to Completion – progress but needs more time
 - Continue/Evolving
 - Terminate



Arctic Projects 2010 - 2012

1. Leverage gap analysis for new observation placement – meteorological requirements for satellite missions
 1. Letter of support for PCW
 2. NOAA High Latitude Testbed Collaboration
 3. Other related activities (UNCLOS Louis/Healy cruise – summer 2011; 4th “Ice-diminished Arctic” symposium 2011)
 - Status: Graduated
2. Deploy new observational instruments
 1. Climate Research Network (CRN) – graduated
 2. Alaska Ocean Observing System instruments –
 3. Distributed Biological Observatory – graduated
 4. Synthetic Aperture Radar (SAR) data – continuing/evolving



Arctic Projects 2010 – 2012 (cont.)

3. Capture, Archive and provide Access to data
 1. NPP, FenYung 3 (China), and Meteor M (Russia) – graduated
 2. Data Sharing MOU – continue/evolving
 3. Alaska Ocean Observing System (AOOS) – continue to completion
4. Other Arctic Activities Accomplishments
 1. Sea Ice Prediction Collaboration – workshop held, new task proposed in conjunction with Marine Forecast Area
 2. WMO – EC PORS – continuing
5. PCW – Mission Coordination Committee Report - completed



Arctic Projects 2012 - 2014

- Arctic theme has been one of the most actively growing aspects of cooperation under the MOU
 - New projects relate to Arctic ERMA, Oil Spill Research, Unmanned Aerial Systems, WMO SPICE
- There are linkages with other areas of cooperation under the MOU (i.e. UAS can inform marine forecasts, EC PORS can contribute to climate, etc.)



Marine Services 2010 - 2012

1. Marine Forecast Process
 - Developed Best Practices inventory and wiki (continue to completion)
2. Exchange of Marine Forecasting Data and Techniques
 - Workshop held in 2011; collaboration on freezing spray techniques and algorithm (continue to completion)
3. Collaboration and Display Tools
 - NWSChat pilot (continue/evolving)
4. Exchange of Marine Products
 - High seas wind/wave, sea ice, freezing spray, marine warnings – working to wards internal consistency (continue/evolving)



Marine Services 2010 – 2012 (cont.)

5. Training Techniques – development of quarterly training webinars
 - Marine module added to COMET Winter Weather Course (continue/evolving)



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Marine Services 2012 - 2014

- Products & service
 - i) harmonizing service offerings
- Science, training and operations
 - ii) MSC-NWS Marine Workshop being planned for Halifax for November 2013; and
 - iii) Training Collaboration.
- Systems & Technology
 - iv) Marine Forecaster Exchange program and Technical collaborative Capability (electronic repository exploring requirements for Next Generation Prediction System interoperability).



Hydrology 2010 - 2012

1. Snow Data Assimilation Systems (graduated)
2. Collaboration on river forecasts for St. John River (graduated)
3. River Ice Modelling (ongoing)
4. Alaska/B.C./Yukon streamflow forecast collaboration (continue to completion)
5. Canada/US Data Exchange and I.J.C. membership for NWS (Continue to Completion)



Hydrology Projects 2012 – 2014

- Snow Assimilation Project
 - NOAA/NWS National Operational Hydrologic Remote Sensing Center (NOHRSC) snow products and information and being used in Southern and Western Canada.
 - Follow-up work looking at product validation in Western Canada
 - EC is hosting a snow assimilation workshop fall 2013
- NESDIS Snowfall Study Verification Project for Hydrology (Algorithm)
- Collaborative Water Modeling for Hydrological Application and Forecasting
- Changing Cold Region Network (CCRN)



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Climate 2010 - 2012

1. North American Climate Services Partnership (NACSP)
 - Tri-partite agreement signed with Mexico, U.S. and Canada in early 2012
 - Umbrella agreement for a range of climate projects (continue/evolving)
2. Standardized Precipitation Index (with AAFC) (graduated)
3. Drought indices and Definition Study – joint project with AAFC in Canada (graduated)
4. NIDIS Drought portal web services and North American Drought Monitor Timeliness (graduated)



Climate 2010 – 2012 (cont.)

5. U.S. and Canadian Climate Reference Networks (graduated)
6. North American Climate Extremes Monitoring (completed)
7. Global Historical Climate Network – Homogenization (continue to completion)



Climate Projects 2012 - 2014

- Continue efforts under NACSP, including drought
- New projects in Gulf of Maine
- Heat/Health under consideration



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October 2013 CSC Session

- Purpose:
 - Showcase achievements
 - Consider how the MOU work can contribute to broader emerging initiatives (next slide)
 - Review theme areas and revise if necessary, setting out priorities and goals for next 2 – 4 years
 - Identify lessons learned to date
 - Broaden interaction between participants
- Outcome:
 - Guidance to CSC and Theme Leads to enable finalizing the next 2 year workplan (due January 2014)



Future Collaboration

- October 2013 Strategic Planning session will focus on plans and priorities over a longer time-frame (i.e. four years), while continuing to define 2 year-project increments.
- Consideration to be given to broader initiatives underway such as:
 - Canada's Chairmanship of the Arctic Council (2012 – 2013) followed by the U.S. Chairmanship (2014 – 2015)
 - WMO Polar Prediction Project
 - Water and energy issues
 - Resilience (i.e. to weather extremes, climate, etc.)
 - Data Management (operational and policy initiatives)



Comments/Questions?

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